Chapter 4: Attainment of Key Program Objectives

> *"Congress finds that…*
>
> *[N]ew investment capital can be attracted to infrastructure projects that are capable of generating their own revenue streams through user charges or other dedicated funding sources….*
>
> *[A] Federal credit program for projects of national significance can complement existing funding resources by filling market gaps, thereby leveraging substantial private co-investment."*
>
> **Transportation Equity Act for the 21st Century (TEA-21)**
> **June 9, 1998**

4.0 Introduction

Measuring the performance of the TIFIA program entails three key assessments: (a) reviewing the financial objectives of the TIFIA program, (b) identifying ways in which the selected projects benefit from TIFIA assistance, and (c) calculating the extent to which TIFIA assistance leverages investment by other parties in transportation infrastructure.

4.1 Financial Objectives of the TIFIA Program

The TIFIA program promotes cost-effective use of Federal resources to encourage co-investment in transportation infrastructure. Federal grant funds that otherwise might be required to support these large projects can then be redirected toward smaller but critical infrastructure investments.

As cited above, the TIFIA statute emphasizes projects that can generate their own revenues via user charges or other dedicated funding sources.

User charges tend to be utilized in stand-alone project financings, where creditors must look only to the project's financial viability without recourse to the assets of corporate or governmental sponsors in the event of shortfalls. Investors in such "non-recourse" projects are subject to construction risk (delays or cost overruns), performance risk (operational feasibility) and demand risk (level of usage due to competition or economic conditions). For these reasons, project-generated revenues tend to be less certain – particularly in the early years of the enterprise – than dedicated taxes or other revenues unrelated to the project's financial performance.

However, projects supported by dedicated but limited revenue sources, such as a special excise tax or assessment, also can face challenges, especially when the financing depends on untested revenue sources or the incremental growth of existing revenues. As described in Chapter One, the TIFIA statute authorizes the DOT to provide credit instruments with flexible terms intended to mitigate co-investor concerns about investment horizon, liquidity, and short-term risk associated with financing these types of transportation projects.

The TIFIA program therefore can be especially important for project credits that need assistance to reach investment grade. The program can thus fill a strategic role in helping such financings gain market access, i.e., to use available resources to attract co-investment on reasonable, cost-effective terms.

4.2 Benefit: Using TIFIA to Facilitate Market Access

Almost by definition, a TIFIA project is a major undertaking characterized by multiple funding sources and complex financial plans. As described above, the TIFIA projects can be grouped into two basic categories: user-backed financings secured primarily or significantly by user fees and tax-backed financings secured by tax revenues or other dedicated sources unrelated to the project.

Exhibit 4-A lists the TIFIA financings according to these categories together with each project's associated subsidy rate.[29] Applying the rate to the credit amount of TIFIA assistance results in the subsidy cost (see Section 2.3) of providing Federal credit support. As explained in detail in Appendix B, the subsidy rate reflects the estimated risk of the TIFIA instrument. Consistent with the discussion above, Exhibit 4-A shows that the user-backed financings tend to require higher subsidy rates than the typically more secure tax-backed financings.

Exhibit 4-A: Basic Categorization of TIFIA Financings

User-backed Financings	Pledged Revenues	Subsidy Rate
Miami Intermodal Center RCF	Rental car customer facility charges	4.8%
SR 125 Toll Road	Facility tolls	11.2%
Farley Penn Station	Commercial lease payments/retail rents	12.5%
Tacoma Narrows Bridge	Facility tolls	9.2%
Central Texas Turnpike	Facility tolls	11.1%
San Francisco-Oakland Bay Bridge	System-wide facility tolls	0.3%
Tax-backed Financings		
Miami Intermodal Center GP	State fuels excise taxes	0.4%
Washington Metro CIP	Local government contributions	2.0%
Tren Urbano	Various commonwealth taxes	2.6%
Cooper River Bridge	State and county contributions	2.8%
Staten Island Ferries and Terminals	Tobacco settlement payments	0.2%
Reno Transportation Rail Access Corridor	Local taxes and assessments	9.7%

Exhibit 4-A also illustrates exceptions to the user-backed/tax-backed distinction regarding relative credit risk. Although most TIFIA user-backed financings are supported by "start-up" revenue streams and generally require credit enhancement to achieve investment grade status, one such financing (the San Francisco-Oakland Bay Bridge Seismic Retrofit) is a relatively secure credit with ready market access. With established traffic use, existing toll collections, a system-wide pledge and good "debt service coverage" (i.e., a high ratio of annual available revenue to debt service), it does not share speculative elements often associated with a user-backed project financing. Although most TIFIA tax-backed financings are supported by predictable revenues unaffected by project performance, one such financing (the Reno Transportation Rail Access Corridor), with taxes linked significantly to the gaming industry and

[29] A detailed list of the subsidy amounts for each TIFIA project selection can be found in Appendix D.

with a reliance on substantial long-term growth to meet steadily rising debt service payments, likely requires TIFIA assistance to obtain market access.

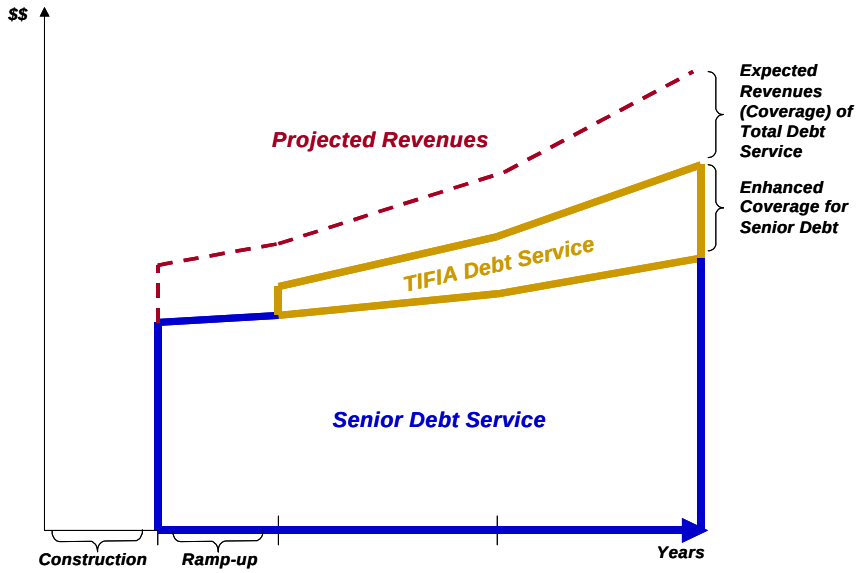
Based on this assessment of credit quality, six TIFIA project selections appear to meet the program's special emphasis of assisting lower-rated credits with new or untested revenue streams.[30] In these transactions, TIFIA assistance likely provided significant or even decisive enhancement in facilitating capital market access. As described later in this chapter, the remaining projects derive other benefits from TIFIA, both financial and otherwise.

4.2.1 Credit Enhancement of Senior Debt

The TIFIA program can help projects to gain market access through a financial technique that separates project debt into senior and subordinate segments (or "tranches"). This structure can produce less expensive overall financing by enhancing the creditworthiness (and lowering the cost) of senior project debt. By funding the subordinate tranche, the TIFIA program assumes greater credit risk because its claim on project revenues is subordinate to that of the senior lender. Although this does not eliminate credit risks for the senior debt holders, the presence of the subordinate tranche affords greater debt service coverage for the senior tranche and thus boosts its creditworthiness.

Exhibit 4-B below illustrates this coverage-enhancing benefit for a hypothetical project financing with senior revenue bonds sold in the capital markets and subordinate revenue bonds purchased by the DOT. The project sponsor can demonstrate to the senior bondholders a broader margin of cash coverage, since their bonds ("senior debt service") have first claim on revenues. In contrast, if all debt held the same priority (i.e., the TIFIA debt service was combined with the senior debt service in one issue), the coverage margin would be thinner.

Exhibit 4-B: TIFIA Subordination Enhancing Senior Debt



[30] The Miami Intermodal Center Rental Car Facility, the SR 125 South Toll Road, the Farley Penn Station Project, the Tacoma Narrows Bridge, the Central Texas Turnpike, and the Reno Transportation Rail Access Corridor.

The cost savings due to lower interest rates on the enhanced senior debt often outweighs the extra expense of the riskier, but smaller, junior debt. For borderline investment grade projects, the replacement of some senior debt with subordinate debt can help the remaining senior bonds reach investment grade status, thus enabling the financing to move ahead. The use of TIFIA as a subordinate lender is predicated on the Federal Government's unique ability to be a patient investor in public infrastructure.

4.3 Benefit: Using TIFIA to Encourage Private Co-Investment

An explicit goal of the TIFIA program is to induce private investment in transportation infrastructure. In addition to offering another funding source, joint investment of private capital brings independent financial discipline from other sophisticated investors. A key program measure, therefore, is the extent to which TIFIA projects include private co-investment in the form of debt or equity capital.[31]

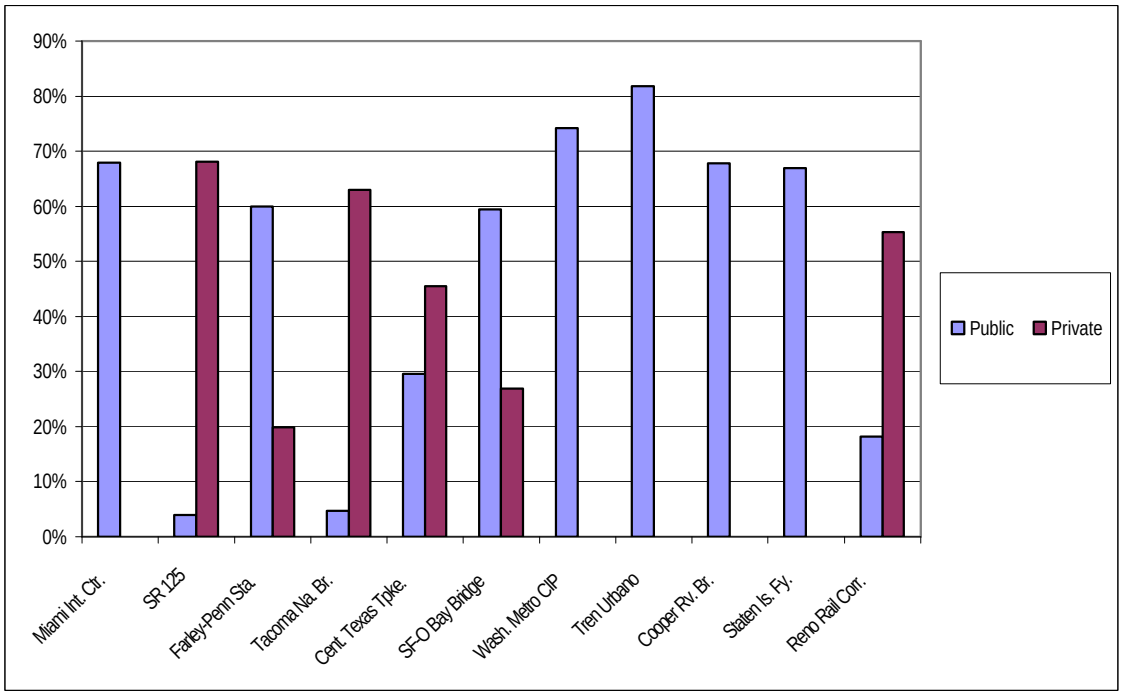
The definition of "private co-investment" is subject to differing interpretations. A narrow definition would hold that a project must have a private sponsor or financier with dollars directly at risk in the project. By this measure, four TIFIA project selections (SR-125, Farley Penn Station, Reno Transportation Rail Access Corridor and Tacoma Narrows Bridge) would be considered to have private co-investment.

As discussed in Chapter One, however, municipal bonds also reflect private co-investment since the bonds are purchased ultimately by private investors. In order to capture this activity, the analysis in this report utilizes two tests – both of which must be met – to determine which project funds represent private co-investment. First, reflecting the fact that private investors, whether individuals or represented by institutions, are largely the purchasers of bonds, the project must feature investor-held debt or equity. Second, the investment return must be derived from project-generated revenues or other revenues levied specifically to support the project. Debt secured by broad-based taxes unrelated to the project would not be considered private co-investment.

By this standard, private co-investment in the TIFIA project selections totals about $3.1 billion, comprised of more than $3 billion in debt and nearly $100 million in equity. This co-investment totals approximately 20 percent of the nearly $15.4 billion in total costs. Exhibit 4-C below displays co-investment percentages for each project. The six project selections that include private co-investment each have amounts equal to or greater than the amount of TIFIA assistance. The five projects with no private co-investment each have public co-investment in excess of 65 percent of their capital costs.

[31] Whether the investment is in the form of debt or equity is of less significance to the DOT than whether it relies upon the same pledged revenues as the TIFIA credit instrument for payment of returns.

Exhibit 4-C: Co-investment in TIFIA Projects (as a percent of capital cost)



Consistent with the TIFIA program's design, the instances of private co-investment are found where TIFIA instruments have subordinate claims on the pledged revenues. Exhibit 4-D details the level of private co-investment by financing type and TIFIA lien. The user-backed financings generally have greater private investment supported by junior TIFIA tranches. However, the tax-backed Reno Transportation Rail Access Corridor also structures TIFIA assistance as junior debt in order to support senior bonds.

Exhibit 4-D: TIFIA Leveraging of Private Co-Investment (as a percent of capital cost)
(Shaded rows indicate projects with private co-investment)

User-backed Financings	Private Equity	Private Debt	TIFIA Lien
Miami Intermodal Center RCF	N/A	N/A	Exclusive Senior
SR 125 Toll Road	14%	48%	Junior
Farley Penn Station	19%	19%	Junior
Tacoma Narrows Bridge	N/A	55%	Junior
Central Texas Turnpike	N/A	38%	Junior
San Francisco-Oakland Bay Bridge	N/A	27%	Junior
Tax-backed Financings			
Miami Intermodal Center GP	N/A	N/A	Exclusive Senior
Washington Metro CIP	N/A	N/A	Exclusive Senior
Tren Urbano	N/A	N/A	Junior
Cooper River Bridge	N/A	N/A	Exclusive Senior
Staten Island Ferries and Terminals	N/A	N/A	Shared Senior

Reno Transportation Rail Access Corridor	69	40%	Junior

As noted previously, TIFIA project selections feature very little private equity. This reflects the general nature of infrastructure finance in the United States, where the cost of debt is the paramount consideration in structuring most finance plans. Under current tax law, projects with substantial private sector participation in either their ownership or operations are prohibited from accessing the less expensive tax-exempt bond market. Project sponsors, therefore, usually find that significant private equity presents a barrier to minimizing financing costs and required user fees. As a result, most private co-investment in transportation projects in the United States takes the form of tax-exempt debt financing.

4.4 Benefits Identified by TIFIA Borrowers

The broad project eligibilities and flexible financial provisions in TIFIA have enabled the DOT to assist projects in meaningful ways other than facilitating market access. Project sponsors of higher-rated credits have found that TIFIA assistance can reduce costs, coalesce support and help remove other barriers in advancing projects.

A number of general factors have been identified in the course of discussions with the project sponsors as well as reviews of TIFIA applications, credit agreements, and project updates. Exhibit 4-E summarizes, for each project, which factors proved most relevant. This analysis suggests that the potential benefits of TIFIA assistance are as varied as the approved projects and their financing structures.

- ***Revenue Leverage***. TIFIA can help the project leverage a new or untested revenue stream that otherwise might not be marketable. This factor often benefits user-backed financings that involve start-up facilities with uncertain revenues expected to grow over time. Six of the financings rely significantly on TIFIA to help borrow against these projected revenues.

- ***Senior Debt Enhancement***. TIFIA can be structured as junior-lien financing in order to enhance the creditworthiness of senior-lien capital markets financing through greater debt service coverage. This factor is highly correlated with revenue leverage, as project sponsors often utilize subordinate debt to maximize the leveraging of project revenues that secure the debt financing. Six of the TIFIA financings benefit from this factor, including five of the financings that also benefit from revenue leverage.

- ***Coverage Benefit***. TIFIA can increase leveraging potential and improve financing efficiency by accepting lower ratios of projected revenues to total debt service. This factor, relating to the required coverage levels on combined senior and junior debt service, is closely associated with senior debt enhancement. If the TIFIA coverage requirement is lower than that for conventional funding sources, it enables the project to raise more proceeds. Eight of the financings benefit from lower coverage on TIFIA debt, including two cases where TIFIA is senior-lien debt.

- ***Public Co-investment***. TIFIA can attract or accompany public co-investment in the form of governmental grants or loans. TIFIA assistance can be a cost-effective way for the Federal Government to help a project complete its plan of finance (in lieu of more grants). Nine of the TIFIA financings have public co-investment exceeding 15 percent of their capital costs.

- ***Private Co-investment***. TIFIA can attract or accompany private co-investment in the form of debt or equity financing. The participation of at-risk private investors is a key objective of the TIFIA program. Six TIFIA financings include private co-investment exceeding 15 percent of their capital costs. Three of the financings receive the majority of their funding from private sources, while two have significant equity contributions.

- ***Interest Cost Savings***. TIFIA's interest rate can result in cost savings compared to the likely rates on alternative financing instruments. For projects that must access the taxable debt markets, borrowing rates are based on a credit spread above the benchmark U.S. Treasury yield curve. TIFIA financing clearly will be attractive because the DOT lends its funds at the U.S. Treasury's borrowing rate.[32] Even for projects able to access the tax-exempt municipal market, TIFIA direct loans may prove cost-effective. It is estimated that six of the TIFIA financings will benefit from interest cost savings.

- ***Transaction Cost Savings***. TIFIA can help the project avoid significant transaction costs that otherwise would be incurred. These include underwriter fees, bond counsel expenses, and other "soft costs" associated with issuing project debt, as well as the "negative carry" (excess of borrowing cost over investment return) of bond proceeds during construction. While typically not prohibitive, these costs can be significant for large transactions involving debt financing. Many project sponsors find TIFIA to be a relatively efficient, cost-effective financing vehicle since the DOT does not charge significant fees for its credit instruments. Seven of the TIFIA financings indicate transaction cost savings as a potentially significant benefit.

- ***Payment Flexibility***. TIFIA can significantly benefit the project financing through its flexible payment features. TIFIA provisions aim to facilitate user-backed financings by allowing debt service to be structured according to project cash flows. Often this entails deferral of interest not only during construction but also during the project's ramp-up of operations, which private investors may be hesitant to accept. In addition, the TIFIA program allows borrowers to prepay at any time without penalty. To obtain this same flexibility through the municipal bond market could add as much as ½ percent to the borrowing cost, depending on market conditions. Eight of the financings benefit from TIFIA's payment flexibility, including all of the user-backed financings.

- ***Political Support***. TIFIA can solidify political support for the project by helping induce other public or private investors to participate. In some cases, Federal financial support for the project can ease the way in securing commitments from other funding partners. Also, a Federal credit commitment can help assure other potential investors that the project will benefit from appropriate oversight. Nine of the TIFIA financings are estimated to benefit from this factor.

- ***Project Acceleration***. TIFIA can expedite the financing and accelerate the public benefits flowing from a completed facility. This factor essentially reflects the cumulative effects of the other factors. In some cases, TIFIA assistance is viewed as essential in advancing the project in its current form. In others, while the project likely would have been financed eventually, TIFIA assistance helps

[32] It appears that all or a portion of the following projects likely will not be eligible for tax-exempt financing, due to private participation: the Miami Intermodal Center Rental Car Facility, the SR 125 South Toll Road, the Reno Transportation Rail Access Corridor, and the Farley Penn Station project.

advance the project more quickly and at a lower cost. It is estimated that TIFIA has helped accelerate eight of the project financings.

Exhibit 4-E: Significant Benefits of TIFIA Financing

Project	Revenue Leverage	Senior Debt Enhance-ment	Coverage Benefit	Public Co-investment	Private Co-investment	Interest Cost Savings	Transaction Cost Savings	Payment Flexibility	Political Support	Project Acceleration
Miami Intermodal - RCF	✔		✔				✔	✔	✔	
SR 125 Toll Road	✔	✔	✔		✔	✔		✔	✔	✔
Farley - Penn Station	✔	✔	✔	✔	✔	✔		✔	✔	✔
Tacoma Narrows Bridge	✔	✔	✔		✔	✔		✔		
Central Texas Turnpike	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
SF-Oakland Bay Bridge		✔	✔	✔	✔		✔	✔	✔	✔
Miami Intermodal - GP				✔			✔		✔	✔
Washington Metro CIP				✔			✔		✔	✔
Tren Urbano				✔			✔	✔		
Cooper River Bridge			✔	✔			✔		✔	✔
Staten Island Ferries				✔		✔				✔
Reno Rail Corridor	✔	✔	✔	✔	✔	✔		✔	✔	

4.5 Calculating the TIFIA Leverage Effect

Calculating the return on Federal investment in participating projects can demonstrate one measure of TIFIA's effectiveness. For a given level of capital investment, Federal cost-effectiveness increases as the budgetary cost of supplying assistance decreases. Thus, for those projects associated with a revenue stream, credit assistance (which will be repaid by project sponsors) is much more efficient to the Federal Government than outright grants.

Measurements of the efficacy of Federal financial tools like the TIFIA program often involve quantifications of leverage. In other words, to what extent is TIFIA assistance supplemented with non-Federal funding in delivering transportation investments deemed beneficial to the public?

Exhibit 4-F summarizes TIFIA project investment by major funding source and basic financing type. It also compares total capital investment to the total budgetary cost of Federal credit *and* grant assistance in the TIFIA projects. As this analysis shows, the TIFIA portfolio represents nearly five dollars in total investment for each dollar of Federal investment. This Federal cost leverage ratio of 4.80 for TIFIA projects compares favorably with the leverage ratio of 1.25 for a Federal-aid project receiving 80 percent of its funding from Federal grant sources. In addition, the Federal cost leverage ratio is significantly higher for the user-backed financings, which have fewer grant contributions than the tax-backed financings.

Exhibit 4-F: Financial Leveraging of Federal Investment
(Millions of dollars)

Funding Source	User-Backed Financings	Tax-Backed Financings	TIFIA Program Total
Federal Grants	$460	$2,566	$3,026
State/Local Funding	2,994	2,256	5,250
TIFIA Assistance	1,971	1,617	3,588
Private Investment	3,003	129	3,132
Other	347	26	373
Total Investment	***$8,775***	***$6,594***	***$15,369***
Subsidy Cost	$156	$34	$190
Subsidy Rate	7.9%	2.1%	5.3%
Leverage Ratio:			
Total Investment / Federal Cost =	***14.2***	***2.5***	***4.8***

Note: Federal cost equals the combined amount of Federal grants and TIFIA subsidy cost.

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